

Work Order ID 163664

Wednesday, July 05, 2017 10:24:21 AM

163664

SCRAP

Item ID: D350-748-101

Accept

Revision ID:

N9000040100

Setup Start *NS1*

Item Name: Fwd Crosstube AS350 / AS355

Stop *NS2*

Start Date: 7/5/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 8/17/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: QC Date: JUL 05 2017 Tooling: 9-69 SPC (Y/N): QC Date: 9-69

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr								
D350-748-141	H								

100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
	Photocopy bluefile & type labels per PPPD350-748-101				CHG004				
	Doc Control -USB or Paperwork								

110 BENDING MACHINE - CROSSTUBES 1.08

110

CNC Bend 1

BENDING MACHINE - CROSSTUBES

0.90

CNC Delta 100 Bender
Memo
Bend tube as per Dwg D350-748-141 using CNC bender program D350F and
Tolio FT

****UNDER BEND .225" PER SIDE****

****USE (4) DT9824 SHIM BLOC TO CHECK STRAIGHTNESS****

****VERIFY CROSSTUBE DIMENSIONS AS PER DWG****

ND 17.07-05

DQA:

Date: _____

QA Closed:

Date: _____

WORK ORDER NON-CONFORMANCE / UPDATEWork Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐		Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐		Step #: _____ QTY Effective : _____ Date : _____		MRB (QS1042) Approval									
Description Work Order Deviation						Disposition													
Completed By						Lead hand / Supervisor Approval Verification													
												QC / QA Coordinator Approval							
FAULT CATEGORY																			
Root Cause				Pressure/Forced Bending Centre Not Concentric Cracks Crimp/Kink/Ripple/Wave Cuffs Crushing Heat Treat Wave/Twist in Tube Marks/Chatter				Temperature/Cure Set-up BOM/Route Broken/Damage/Defect Inspection Incomplete/Unqualified Contamination Countersink Cut Too Short Instructions Incomplete/Unclear Drill Holes				Power Loss/Surge Folio/Program Grain Weld Wrong Stock Pulled Out of Sequence Off-set Mislabeled Fit/Function Misaligned/off center				Positioned Wrong Outside Dimensions Over/Under tolerance Part Incorrect Part Lost/Missing Part Moved Drawing Finish Misread Turning Sequence			
No Re-verification Operator Offset/Setup Supplier Training Use for Testing Poor Information Rushing Product Improvement Process Improvement Manufacturing Process Past Due				Environment Design Doc/Data Equip/Tooling Handling/Pre Material Internal Transport Tribal Knowledge LOA Substation Past Expiry Date Misidentified															
OTHER : _____																			

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Setup Start

NS1

Item Name: Fwd Crossube AS350 / AS355

Stop

NS2

Start Date: 7/5/2017

Start Qty: 1.00

1

Cust Item ID:

Required Date: 8/17/2017

Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan
Code

Accept Qty

Reject Qty

Reject Number Insp.
Stamp

125 Outsource process - Heat Treat

0.00

125

Outsource1

Memo

Outsource process - Heat Treat

ISSUE P/O TO METCOR

36937

504.00

Stress relief

Heat treat crossube as per QSI010 4.3 within 12h after bending

1 JUL 05 2017

DAS 13

126

Receive & Inspect for Damage & Mar'l Cnts

0.00

126

Packaging

Memo

0.02

Packaging

1x SPB-2-6

127

QC15-Crossube Dimensional Check

0.00

127

QC

Memo

0.00

Quality Control

MARK CUT LINES

1

DAS 38
9-89
JUL 11



DQA: _____ Date: _____
QA Closed: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐		Engineering ☐ Quality ☐ Other ☐	
Date : _____		Step #: _____		QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation				Disposition			
				Completed By			
				Lead hand / Supervisor Approval Verification			
				QC / QA Coordinator Approval			
Root Cause				FAULT CATEGORY			
Environment ☐				Temperature/Cure ☐			
Design ☐				Set-up ☐			
Doc/Data ☐				BOM/Route ☐			
Equip/Tooling ☐				Broken/Damage/Defect ☐			
Handling/Pre ☐				Inspection Incomplete/Unqualified ☐			
Material ☐				Contamination ☐			
Internal Transport ☐				Countersink ☐			
Tribal Knowledge ☐				Cut Too Short ☐			
LOA ☐				Instructions Incomplete/Unclear ☐			
Substation ☐				Drill Holes ☐			
Past Expiry Date ☐				Pressure/Forced ☐			
Misidentified ☐				Bending ☐			
				Centre Not Concentric ☐			
				Cracks ☐			
				Crimp/Kink/Ripple/Wave ☐			
				Cuffs ☐			
				Crushing ☐			
				Heat Treat ☐			
				Wave/Twist in Tube ☐			
				Marks/Chatter ☐			
				No Re-verification ☐			
				Operator ☐			
				Offset/Setup ☐			
				Supplier ☐			
				Training ☐			
				Use for Testing ☐			
				Poor Information ☐			
				Rushing ☐			
				Product Improvement ☐			
				Process Improvement ☐			
				Manufacturing Process ☐			
				Past Due ☐			
				OTHER : _____			

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163664

Item ID: D350-748-101

Accept

Revision ID:

N9000040100

Setup Start

N.S1

Item Name: Fwd Crossube AS350 / AS355

Stop *N.S2*

Start Date: 7/5/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 8/17/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan:

Date: Tooling:

Date:

Run Start

NR1

QC: Date: SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

128

128

Crossubes

Memo

1.22

Crossubes

CUT TUBE AT HEIGHT ON FAI SHEET

VERF HEIGHT 1325 BY QC 15 LEVEL INSPECTOR

VERF TWIST 0.05" BY QC 15 LEVEL INSPECTOR

130

130

Crossubes

Crossubes

Memo

1.24

Crossubes

2- Drill Tube as per Dwg D350-748-141 Using DT876 A,B & C Drill Hgs.
Set-up drill table as per QSI 010

3- Debur

4- Engrave Part # and Batch # as per Dwg D350-748-141

5- Remove all marks from tube within limits of D350-748-141

6- Apply a light coat of LPS3 on the interior of tube

Batch:

GP 17-03-13
DR2 17-07-13

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS				Engineering ☐	
Part No. _____		Rework ☐		Skid-tube ☐		Cross tube ☐		Water Jet ☐	
NCR No. _____		Scrap ☐		Machining ☐		Small Fab ☐		Prod. Eng. Coord. ☐	
Date: _____		Use-as-is ☐		Thermoforming ☐		Finishing ☐		Rec/Store/Packaging ☐	
Step #: _____		Suspected Unapproved ☐		Large Fab ☐		Composite ☐		Supplier ☐	
Date: _____		QTY Effective: _____		MRB (QS1042) Approval					
Description Work Order Deviation		Disposition							
Completed By		Lead hand / Supervisor Approval Verification							
QC / QA Coordinator Approval		QC / QA Coordinator Approval							

Root Cause		FAULT CATEGORY												
Environment	No Re-verification	Pressure/Forced	Temperature/Cure	Power Loss/Surge	Positioned Wrong	Outside Dimensions	Over/Under tolerance	Part Incorrect	Part Lost/Missing	Part Moved	Drawing	Finish	Misread	Turning Sequence
Design	Operator	Bending	Set-up	Folio/Program			Grain	Weld	Wrong Stock Pulled	Out of Sequence	Off-set			
Doc/Data	Offset/Setup	Centre Not Concentric	BOM/Route											
Equip/Tooling	Supplier	Cracks	Broken/Damage/Defect											
Handling/Pre	Training	Crimp/Kink/Ripple/Wave	Inspection Incomplete/Unqualified											
Material	Use for Testing	Cuffs	Contamination											
Internal Transport	Poor Information	Crushing	Countersink											
Tribal Knowledge	Rushing	Heat Treat	Cut Too Short											
LOA	Product Improvement	Wave/Twist in Tube	Instructions Incomplete/Unclear											
Substation	Process Improvement	Marks/Chatter	Drill Holes											
Past Expiry Date	Manufacturing Process													
Misidentified	Past Due													
OTHER: _____														

Work Order ID 163664
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163664

Page 4

Item ID: D350-748-101 / Accept *N9000040100N* Setup Start *NS1*
Revision ID: Fwd Crossbore AS350 / AS355 Stop *NS2*
Item Name: Fwd Crossbore AS350 / AS355
Start Date: 7/5/2017 Start Qty: 1.00 *1*
Required Date: 8/17/2017 Req'd Qty: 1.00 *1*
Cust Item ID:
Reference: Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	QCS- Inspect part completeness to step on W/O	0.00							
140	Memo CHECK 10 DEG HOLES WITH DT8876E (EUROCOPTER CLAMP)	0.02							JUL 13 2017 DAS 38
QC									
Quality Control									

150 Outsource process-Cadplate per QSI017 4.1.9.1 0.00
150
Outsource3
Outsource process - Cad plate
Memo
issue P/O: 37045
Stress relief at 375° for 5 hours
Magnetic Particle Inspect per ASTM E1444
Cadmium Plate per AMS-QQ-P-416B, Class 1, Type 2
Embrittle relief at 375° for 8 hours, Chromate Treat
Possible Supplier: Southwest United Industries
Ensure Certificate of Conformity is attached

160 Receive & Inspect for Damage & Matl Certs 0.00
160
Packaging
Memo
Ensure certificate of conformity is attached 0.02
Packaging

1x 8017-7-25

DAS 13
9-88

JUL 19/04/14

DQA: _____ Date: _____

Date:

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION ☐ Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved		AGAINST DEPARTMENT/PROCESS ☐ Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other			
Date : _____		Step #: _____		QTY Effective : _____			
Description Work Order Deviation		Disposition		MRB (QSI042) Approval			
Completed By		Lead hand / Supervisor Approval Verification		QC / QA Coordinator Approval			

Root Cause		FAULT CATEGORY									
Environment	No Re-verification	Pressure/Forced	Temperature/Cure	Power Loss/Surge	Positioned Wrong						
Design	Operator	Bending	Set-up	Folio/Program	Outside Dimensions						
Doc/Data	Offset/Setup	Centre Not Concentric	BOM/Route	Grain	Over/Under tolerance						
Equip/Tooling	Supplier	Cracks	Broken/Damage/Defect	Weld	Part Incorrect						
Handling/Pre	Training	Crimp/Kink/Ripple/Wave	Inspection Incomplete/Unqualified	Wrong Stock Pulled	Part Lost/Missing						
Material	Use for Testing	Cuffs	Contamination	Out of Sequence	Part Moved						
Internal Transport	Poor Information	Crushing	Countersink	Off-set	Drawing						
Tribal Knowledge	Rushing	Heat Treat	Cut Too Short	Mislabeled	Finish						
LOA	Product Improvement	Wave/Twist in Tube	Instructions Incomplete/Unclear	Fit/Function	Misread						
Substation	Process Improvement	Marks/Chatter	Drill Holes	Misaligned/off center	Turning Sequence						
Past Expiry Date	Manufacturing Process										
Misidentified	Past Due										
OTHER :											

Work Order ID 163664

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Page 5

Item ID: D350-748-101

Revision ID:

Item Name: Fwd Crosstube AS350 / AS355

Start Date: 7/5/2017 Start Qty: 1.00

Required Date: 8/17/2017 Req'd Qty: 1.00

Reference:

Accept

N900040100

Setup Start

NS1

Stop

NS2

Cust Item ID:

Customer:

Approvals: Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID Tool # Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

170 QC- All purchased or subcontracted products

0.00

17N

Memo

0.02

QC

Memo

0.02

JUL 25 2017

P.T.O.

174 Outsource process - NDI per QSI038 4.1

0.00

17A

Memo

48.00

Outsource process - NDI ISSUE P/O TO ACUREN:

176 Receive & Inspect for Damage & Matl Certs

0.00

17A

Memo

0.02

Packaging

Packaging

18 Jan 2019



DQA: _____ Date: _____
QA Closed: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: <u>163664</u>		AGAINST DEPARTMENT/PROCESS																																																							
Part No. <u>D350-748-101</u>		Water Jet ☐																																																							
NCR No. <u>19-7170</u>		Prod. Eng. Coord. ☐																																																							
Date: <u>17-07-25</u>		Rec/Store/Packaging ☐																																																							
Step #: <u>10</u>		Supplier ☐																																																							
Description Work Order Deviation		Disposition																																																							
cross tube foil MPI		Perform LPI and ECT to determine location and depth of crack and get approval if cross tube is scrap or can be repair per ICA-D350-748																																																							
Root Cause		Fault Category																																																							
<table border="1"><tr><td>Environment</td><td>No Re-verification</td></tr><tr><td>Design</td><td>Operator</td></tr><tr><td>Doc/Data</td><td>Offset/Setup</td></tr><tr><td>Equip/Tooling</td><td>Supplier</td></tr><tr><td>Handling/Pre</td><td>Training</td></tr><tr><td>Material</td><td>Use for Testing</td></tr><tr><td>Internal Transport</td><td>Poor Information</td></tr><tr><td>Tribal Knowledge</td><td>Rushing</td></tr><tr><td>LOA</td><td>Product Improvement</td></tr><tr><td>Substation</td><td>Process Improvement</td></tr><tr><td>Past Expiry Date</td><td>Manufacturing Process</td></tr><tr><td>Misidentified</td><td>Past Due</td></tr></table>		Environment	No Re-verification	Design	Operator	Doc/Data	Offset/Setup	Equip/Tooling	Supplier	Handling/Pre	Training	Material	Use for Testing	Internal Transport	Poor Information	Tribal Knowledge	Rushing	LOA	Product Improvement	Substation	Process Improvement	Past Expiry Date	Manufacturing Process	Misidentified	Past Due	<table border="1"><tr><td>Temperature/Cure</td><td>Power Loss/Program</td><td>Positioned Wrong</td></tr><tr><td>Set-up</td><td>Folio/Program</td><td>Outside Dimensions</td></tr><tr><td>BOM/Route</td><td>Grain</td><td>Over/Under tolerance</td></tr><tr><td>Broken/Damage/Defect</td><td>Weld</td><td>Part Incorrect</td></tr><tr><td>Inspection Incomplete/Unqualified</td><td>Wrong Stock Pulled</td><td>Part Lost/Missing</td></tr><tr><td>Contamination</td><td>Out of Sequence</td><td>Part Moved</td></tr><tr><td>Countersink</td><td>Off-set</td><td>Drawing</td></tr><tr><td>Cut Too Short</td><td>Mislabeled</td><td>Finish</td></tr><tr><td>Instructions Incomplete/Unclear</td><td>Fit/Function</td><td>Misread</td></tr><tr><td>Drill Holes</td><td>Misaligned/off center</td><td>Turning Sequence</td></tr></table>		Temperature/Cure	Power Loss/Program	Positioned Wrong	Set-up	Folio/Program	Outside Dimensions	BOM/Route	Grain	Over/Under tolerance	Broken/Damage/Defect	Weld	Part Incorrect	Inspection Incomplete/Unqualified	Wrong Stock Pulled	Part Lost/Missing	Contamination	Out of Sequence	Part Moved	Countersink	Off-set	Drawing	Cut Too Short	Mislabeled	Finish	Instructions Incomplete/Unclear	Fit/Function	Misread	Drill Holes	Misaligned/off center	Turning Sequence
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Item ID: D350-748-101

Accept

Revision ID:

Item Name: Fwd Crossstube AS350 / AS355

N9000040100

Setup Start

NS1

Start Date: 7/5/2017

Start Qty: 1.00

1

Required Date: 8/17/2017

Req'd Qty: 1.00

1

Cust Item ID:
Customer:

Stop *NS2*

Reference:

Approvals:

Process Plan:

Date:

Tooling:

SPC (Y/N):

Date:

Run Start

Stop

NR1
NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

178 QC5- Inspect part completeness to step on W/O

0.00

178

Memo

0.02

QC

Quality Control

179

Pressure Wash per QSI003 4.3

0.00

179

HandFinish

Memo

0.00

Hand Finishing

DQA: _____ Date: _____
 QA Closed _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐ Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐	AGAINST DEPARTMENT/PROCESS	Date: _____ Step #: _____ QTY Effective : _____ Disposition: _____ Description Work Order Deviation: _____	MRB (QS1042) Approval _____ Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____																																																																																																																																																																																																				
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Work Order ID 163664
Wednesday, July 05, 2017 10:24:21 AM

163664

Item ID:	D350-748-101	Accept	*N900040100*	Setup	Start	*NS1*
Revision ID:						
Item Name:	Fwd Crosssubc AS350 / AS355				Stop	*NS2*
Start Date:	7/5/2017	Start Qty:	1.00	*1*		
Required Date:	8/17/2017	Req'd Qty:	1.00	*1*		
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
	QC:	Date:	SPC (Y/N):	Date:		Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	Spray Painting per QSI005 4.2	0.00							
180	Spray/Paint								
Spray Painting									

Memo 1.49

***VERIFY BY BATCH # TO MATCH W/O

***VERIFY BY PART # TO MATCH W/O

MASK SCRIBE B# & P# AND VERIFY

1-Prime inside and out crosssubc as per QSI 005 4.2

BATCH:

2-Paint Outside of Tube as per Dart QSI 005 4.2

BATCH:

190 QC14-Inspect Spray Paint 0.00

190

QC

Quality Control

Memo 0.01

Then, Wrap in plastic bag to protect from scratches

***VERIFY BY BATCH # TO MATCH W/O

***VERIFY BY PART # TO MATCH W/O



DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS																																																																																																																																															
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Work Order ID 163664

Wednesday, July 05, 2017 10:24:21 AM

163664

Item ID:	D350-748-101	Accept	*N9000040100*	Setup	Start	*NS1*
Revision ID:					Stop	*NS2*
Item Name:	Fwd Crosstube AS350 / AS355					
Start Date:	7/5/2017	Start Qty:	1.00	*1*		
Required Date:	8/17/2017	Req'd Qty:	1.00	*1*		
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	*NR1*
QC:		Date:	SPC (Y/N):	Date:		Stop	*NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200		0.00							

200 Crossstubes

Memo 2.44

INSTALL GROUND WIRE INSERT, THEN INSERT SCREW AND WASHER

1- Abrade mating surfaces of support and crosstube with 180 grit sandpaper, clean the area with MEK or equivalent as per dwg

2- Install supports with Proseal 890 per D350-748-141 and QSI 015
A/R Proseal 890 Batch: EXP:

3- Install supports clamps Using D18876 as per Dwg D350-748-141, Torque to 60-80 IN-LBS.

PROSEAL CURE TIME 72 HOURS:

Start: Finish:

RE-CHECK TORCQUE ON CLAMP AFTER PROSEAL HAS CURED FOR 72HOURS AS PER DWG.

Work Order ID 163664

Wednesday, July 05, 2017 10:24:21 AM

163664

Item ID: D350-748-101
Revision ID:

Accept

N9000040100

Setup Start

N.S.1

Item Name: Fwd Crosstube AS350 / AS355

Stop

N.S.2

Start Date: 7/5/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 8/17/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

210 QCS-Inspect part completeness to step on W/O 0.00

210

QC

Memo
***RE-CHECK TORCQUE ON CLAMP AFTER PROSEAL HAS CURED
FOR 72HOURS AS PER DWG.***

***VERIFY BY _____ BATCH # TO MATCH W/O

***VERIFY BY _____ PART # TO MATCH
W/O _____

220

Pick Kit

0.00

220

Packaging

Memo

0.00

Packaging

163664

Page 10

NS

Stop *NIC* Stop

Customer:

NR1

Stop
NR?

Reject Number	Insp. Stann
---------------	-------------

0-0-0

*****VERIFY BY _____ PART # TO MATCH**
W/O

0.00

**Identify and pack for shipping as per PPP D350-748-101
Location:FG035**

0.00

0.10

Quality Control

Page 1

Work Order ID:	163664	*163664*
Parent Item:	D350-748-101	*D350-748-101*
Parent Item Name:	Fwd Crosstube AS350 / AS355	

Start Date: 7/5/2017 **Required Date:** 8/17/2017

Start Qty: 1.00	Required Qty: 1.00
-----------------	--------------------

Comments: IPP Rev:A New Issue 06-07-05 JLM

IPP Rev:A	New Issue	06-07-05	JLM	
IPP Rev:B	Update qty of MSZ1042L5	06-09-12	KJ	VERIF
BY:DD				
IPP Rev:C	Rev B	07-11-15	DD	
IPP Rev:D	Combined manufacturing	08-04-02	EC	verified by: DD
IPP Rev:E	08-06-24 revD as per dwg	DD	verified by: EC	IPP Rev:F
10.08.04	added QS1010 4.3	DD	verf:EC	
IPP REV:G	ADD UNDER BEND COMMENT	12-05-28	JLM	IPP
REV:H	12.11.05 as per dwg D350-748-141G	DD	verif:JLM	IPP REV:I
15.03.19	as per dwg D350-748-141revH dd verif:jlm			

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D350-748-141TRN		Manufactured	No			110	Each	11.0000	1	1			

D350-748-141TRN **Maru**
D350-748-141TRN
Crosstube Turning Detail

**

MBG 6/7/07/05

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
HAULT	11	
130790	0	
158695	1	
158696	1	
158697	1	
158699	1	
158700	1	
158701	1	
158716	1	
158717	1	
158718	1	
158719	1	
158720	1	

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order update only

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order: _____ Part No.: _____ NCR No.: _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐		Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐		Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐		Engineering ☐ Quality ☐ Other ☐							
Date: _____ Step #: _____		QTY Effective: _____		MRB (QSI042) Approval													
Description Work Order Deviation						Disposition											
Completed By						Lead hand / Supervisor Approval Verification											
												QC / QA Coordinator Approval					
FAULT CATEGORY																	
Root Cause				Pressure/Forced				Temperature/Cure				Power Loss/Surge					
Environment ☐				Bending ☐				Set-up ☐				Folio/Program ☐					
Design ☐				Centre Not Concentric ☐				BOM/Route ☐				Grain ☐					
Doc/Data ☐				Cracks ☐				Broken/Damage/Defect ☐				Weld ☐					
Equip/Tooling ☐				Crimp/Kink/Ripple/Wave ☐				Inspection Incomplete/Unqualified ☐				Wrong Stock Pulled ☐					
Hand Ing/Pre ☐				Cuffs ☐				Contamination ☐				Out of Sequence ☐					
Material ☐				Crushing ☐				Countersink ☐				Off-set ☐					
Internal Transport ☐				Heat Treat ☐				Cut Too Short ☐				Mislabeled ☐					
Tribal Knowledge ☐				Wave/Twist in Tube ☐				Instructions Incomplete/Unclear ☐				Fit/Function ☐					
LOA ☐				Marks/Chatter ☐				Drill Holes ☐				Misaligned/off center ☐					
Substation ☐				OTHER: _____													
Past Expiry Date ☐																	
Misidentified ☐																	

Picklist Print

Wednesday, July 05, 2017 10:24:24 AM

Work Order ID: 163664

163664

Parent Item: D350-748-101

D350-748-101

Parent Item Name: Fwd Crosstube AS350 / AS355

Start Date: 7/5/2017

Required Date: 8/17/2017

Start Qty: 1.00

Required Qty: 1.00

AL S4-1032-225

AEI S8-1032-225

Purchased

No

200

Each

2,620.000

1

1

AL S4-1032-225

**

Rivnut

Location

Loc Qty

Loc Code

FG

M134975

55

20

M135998

5

30

M136579

30

2200

FP001

M133603

40

38

M133920

2111

11

M135998

365

365

M136265

365

365

ST356

M136379

365

365

ST356

M136379

365

365

MS21920-20

Purchased

No

200

Each

146.0000

2

2

MS21920-20

**

Clamp

Location

Loc Qty

Loc Code

FG

122254

2

2

LG050

m137361

142

17

m137587

50

50

m137710

25

25

m137820

2

2

m128650

1

1

m132675

1

1

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐ Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐		AGAINST DEPARTMENT/PROCESS			
Date : _____		Step #: _____		QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation				Disposition			
Completed By				Lead hand / Supervisor Approval Verification			
QC / QA Coordinator Approval				QC / QA Coordinator Approval			

Root Cause		FAULT CATEGORY									
Environment	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐	Outside Dimensions	☐
Design	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Over/Under tolerance	☐	Over/Under tolerance	☐
Doc/Data	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Part Incorrect	☐	Part Lost/Missing	☐
Equip/Tooling	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Moved	☐	Drawing	☐
Handling/Pre	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Finish	☐	Misread	☐
Material	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Turning Sequence	☐		☐
Internal Transport	☐	Crushing	☐	Countersink	☐	Off-set	☐		☐		☐
Tribal Knowledge	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐		☐		☐
LOA	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐		☐		☐
Substation	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐		☐		☐
Past Expiry Date	☐		☐		☐		☐		☐		☐
Misidentified	☐		☐		☐		☐		☐		☐
		OTHER : _____									

Picklist Print

Wednesday, July 05, 2017 10:24:24 AM

Work Order ID: 163664

Parent Item: D350-748-101

Parent Item Name: Fwd Crosscube AS350 / AS355

163664
D350-748-101

Start Date: 7/5/2017

Required Date: 8/17/2017

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-10

Purchased

No

200 Each

170.0000

1

1

MS27039-1-10

SCREW

**

Location

Loc Qty

Loc Code

GA

15

m129541

15

over006

119

m137736

119

ST280

36

m137164

6

m137597

30

Manufactured

No

200 Each

104.0000

2

2

D5123-7

Clamp Cushion

**

Location

Loc Qty

Loc Code

LG052

104

151551

12

153236

92

Manufactured

No

200 Each

58.0000

2

2

D3502-1

Support

**

Location

Loc Qty

Loc Code

LG052

58

150010

14

150683

2

158881

20

161764

22

Wednesday, July 05, 2017 10:24:24 AM

Shop Packet Print

QA closed. Date:

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION ☐ Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved		AGAINST DEPARTMENT/PROCESS ☐ Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other				Date : _____ Step #: _____		MRB (QSI042) Approval	
Description Work Order Deviation				Disposition							
Completed By				Lead hand / Supervisor Approval Verification							
								QC / QA Coordinator Approval			
Root Cause				FAULT CATEGORY							
☐ Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified	☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due	☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter	☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes	☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center	☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence						
OTHER : _____											

Picklist Print

Wednesday, July 05, 2017 10:24:24 AM

Work Order ID: 163664

Parent Item: D350-748-101

Parent Item Name: Fwd Crosstube AS350 / AS355

16.3664
D350-748-101

Start Date: 7/5/2017

Required Date: 8/17/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0363J

Purchased

No

200

Each

631.0000

1

1

NAS1149D0363.J

Washer

**

Location

Loc Qty

Loc Code

GA

43

m134055

13

m137164

30

ST263

588

m137587

588

220

Each

551.0000

16

16

AN4-6A

Purchased

No

AN4-6A

BOLT

**

Location

Loc Qty

Loc Code

ST345

551

M137464

551

220

Each

40.0000

4

4

D3500-1

Manufactured

No

D3500-1

Saddle

**

Location

Loc Qty

Loc Code

ST406

40

158741

40

220

Each

3,313.000

32

32

NAS1149D0463J

Purchased

No

NAS1149D0463.J

Washer

**

Location

Loc Qty

Loc Code

GA

40

M135056

40

ST260a

2000

M137699

2000

ST263

1273

M137371

1273

Wednesday, July 05, 2017 10:24:24 AM

Shop Packet Print

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order update only ☐

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐		MRB (QSI042) Approval	
Date: _____ Step #: _____		QTY Effective : _____		Disposition		Completed By	
Description Work Order Deviation						Lead hand / Supervisor Approval Verification	
						QC / QA Coordinator Approval	

Root Cause		FAULT CATEGORY									
Environment	No Re-verification	Pressure/Forced	Temperature/Cure	Power Loss/Surge	Positioned Wrong						
Design	Operator	Bending	Set-up	Folio/Program	Outside Dimensions						
Doc/Data	Offset/Setup	Centre Not Concentric	BOM/Route	Grain	Over/Under tolerance						
Equip/Tooling	Supplier	Cracks	Broken/Damage/Defect	Weld	Part Incorrect						
Handling/Pre	Training	Crimp/Kink/Ripple/Wave	Inspection Incomplete/Unqualified	Wrong Stock Pulled	Part Lost/Missing						
Material	Use for Testing	Cuffs	Contamination	Out of Sequence	Part Moved						
Internal Transport	Poor Information	Crushing	Countersink	Off-set	Drawing						
Tribal Knowledge	Rushing	Heat Treat	Cut Too Short	Mislabeled	Finish						
LOA	Product Improvement	Wave/Twist in Tube	Instructions Incomplete/Unclear	Fit/Function	Misread						
Substation	Process Improvement	Marks/Chatter	Drill Holes	Misaligned/off center	Turning Sequence						
Past Expiry Date	Manufacturing Process										
Misidentified	Past Due										
		OTHER :									

Picklist Print

Wednesday, July 05, 2017 10:24:24 AM

Work Order ID: 163664

Parent Item: D350-748-101

Parent Item Name: Fwd Crosstube AS350 / AS355

16.3664

D350-748-101

Start Date: 7/5/2017

Required Date: 8/17/2017

Start Qty: 1.00

Required Qty: 1.00

AN5-32A

Purchased

No

220

Each

243.0000

4

4

AN5-32A

Bolt

Location

Loc Qty

Loc Code

over004

120

m137853

120

ST336

123

m137320

3

m137464

120

No

220

Each

240.0000

8

8

AN4-41A

AN4-41A

Bolt

Purchased

No

220

Each

240.0000

8

8

Location

Loc Qty

Loc Code

over003

161

m137464

41

m137544

120

ST342

79

m133769

2

m136851

37

m137320

40

No

220

Each

379.0000

16

16

D3501-1

D3501-1

Bushing

Manufactured

No

220

Each

379.0000

16

16

Location

Loc Qty

Loc Code

ST037

61

159311

61

ST038A

318

152871

0

161783

120

162915

198

Wednesday, July 05, 2017 10:24:24 AM

Shop Packet Print

Date-

Date:

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only

Work Order: _____		DISPOSITION						AGAINST DEPARTMENT/PROCESS									
Part No. _____		Suspected Unapproved						Skid-tube Machining Thermoforming Large Fab		Cross tube Small Fab Finishing Composite		Water Jet Prod. Eng Coord. Rec/Store/Packaging Supplier		Engineering Quality Other			
NCR No.										MRB (QSI042) Approval							
Date :		Step #:		QTY Effective :													
Description Work Order Deviation		Disposition															
												Completed By					
												Lead hand / Supervisor Approval Verification					
												QC / QA Coordinator Approval					
Root Cause		FAULT CATEGORY															
Environment	No Re-verification	Pressure/Forced	Temperature/Cure	Power Loss/Surge	Positioned Wrong												
Design	Operator	Bending	Set-up	Folio/Program	Outside Dimensions												
Doc/Data	Offset/Setup	Centre Not Concentric	BOM/Route	Grain	Over/Under tolerance												
Equip/Tooling	Supplier	Cracks	Broken/Damage/Defect	Weld	Part Incorrect												
Handling/Pre	Training	Crimp/kink/Ripple/Wave	Inspection Incomplete/Unqualified	Wrong Stock Pulled	Part Lost/Missing												
Material	Use for Testing	Cuffs	Contamination	Out of Sequence	Part Moved												
Internal Transport	Poor Information	Crushing	Countersink	Off-set	Drawing												
Tribal Knowledge	Rushing	Heat Treat	Cut Too Short	Mislabeled	Finish												
LOA	Product Improvement	Wave/Twist in Tube	Instructions Incomplete/Unclear	Fit/Function	Misread												
Substation	Process Improvement	Marks/Chatter	Drill Holes	Mismatched/off center	Turning Sequence												
Past Expiry Date	Manufacturing Process																
Misidentified	Past Due																
OTHER :																	

Picklist Print

Wednesday, July 05, 2017 10:24:24 AM

Work Order ID: 163664

Parent Item: D350-748-101

Parent Item Name: Fwd Crosscube AS350 / AS355

163664
D350-748-101

Start Date: 7/5/2017

Required Date: 8/17/2017

Start Qty: 1.00

Required Qty: 1.00

MS210421.5

Purchased

No

220

Each

565.0000

4

4

MS210421.5

Nut

**

Location

Loc Qty

Loc Code

GA

12

12

m127813

ST303

553

53

m137478

m137587

500

220

Each

1,899.000

24

24

MS210421.4

Purchased

No

MS210421.4

Nut

**

Location

Loc Qty

Loc Code

FP001

10

10

m133363

GA

51

51

m135058

OVER007

1000

1000

m137680

ST303

838

400

m137402

m137544

438

Wednesday, July 05, 2017 10:24:24 AM

Shop Packet Print

DQA:

Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed.

Date: _____

Work Order update only



Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS				Engineering																																																																																	
Part No. _____		Rework Scrap Use-as-is		Skid-tube Machining Thermoforming Large Fab		Cross tube Small Fab Finishing Composite		Water Jet Prod. Eng. Coord. Rec/Store/Packaging Supplier																																																																																	
NCR No. _____		Suspected Unapproved						Quality Other																																																																																	
Date: _____		Step #:		QTY Effective :				MRB (QS1042) Approval																																																																																	
Description Work Order Deviation				Disposition																																																																																					
Root Cause <table border="1"> <tr> <td>Environment</td><td>No Re-verification</td><td>Pressure/Forced</td><td>Temperature/Cure</td><td>Power Loss/Surge</td><td>Positioned Wrong</td></tr> <tr> <td>Design</td><td>Operator</td><td>Bending</td><td>Set-up</td><td>Folio/Program</td><td>Outside Dimensions</td></tr> <tr> <td>Doc/Data</td><td>Offset/Setup</td><td>Centre Not Concentric</td><td>BOM/Route</td><td>Grain</td><td>Over/Under tolerance</td></tr> <tr> <td>Equip/Tooling</td><td>Supplier</td><td>Cracks</td><td>Broken/Damage/Defect</td><td>Weld</td><td>Part Incorrect</td></tr> <tr> <td>Handling/Pre</td><td>Training</td><td>Crimp/Kink/Ripple/Wave</td><td>Inspection Incomplete/Unqualified</td><td>Wrong Stock Pulled</td><td>Part Lost/Missing</td></tr> <tr> <td>Material</td><td>Use for Testing</td><td>Cuffs</td><td>Contamination</td><td>Out of Sequence</td><td>Part Moved</td></tr> <tr> <td>Internal Transport</td><td>Poor Information</td><td>Crushing</td><td>Countersink</td><td>Off-set</td><td>Drawing</td></tr> <tr> <td>Tribal Knowledge</td><td>Rushing</td><td>Heat Treat</td><td>Cut Too Short</td><td>Mislabeled</td><td>Finish</td></tr> <tr> <td>LOA</td><td>Product Improvement</td><td>Wave/Twist in Tube</td><td>Instructions Incomplete/Unclear</td><td>Fit/Function</td><td>Misread</td></tr> <tr> <td>Substation</td><td>Process Improvement</td><td>Marks/Chatter</td><td>Drill Holes</td><td>Misaligned/off center</td><td>Turning Sequence</td></tr> <tr> <td>Past Expiry Date</td><td>Manufacturing Process</td><td></td><td></td><td></td><td></td></tr> <tr> <td>Misidentified</td><td>Past Due</td><td></td><td></td><td></td><td></td></tr> </table>				Environment	No Re-verification	Pressure/Forced	Temperature/Cure	Power Loss/Surge	Positioned Wrong	Design	Operator	Bending	Set-up	Folio/Program	Outside Dimensions	Doc/Data	Offset/Setup	Centre Not Concentric	BOM/Route	Grain	Over/Under tolerance	Equip/Tooling	Supplier	Cracks	Broken/Damage/Defect	Weld	Part Incorrect	Handling/Pre	Training	Crimp/Kink/Ripple/Wave	Inspection Incomplete/Unqualified	Wrong Stock Pulled	Part Lost/Missing	Material	Use for Testing	Cuffs	Contamination	Out of Sequence	Part Moved	Internal Transport	Poor Information	Crushing	Countersink	Off-set	Drawing	Tribal Knowledge	Rushing	Heat Treat	Cut Too Short	Mislabeled	Finish	LOA	Product Improvement	Wave/Twist in Tube	Instructions Incomplete/Unclear	Fit/Function	Misread	Substation	Process Improvement	Marks/Chatter	Drill Holes	Misaligned/off center	Turning Sequence	Past Expiry Date	Manufacturing Process					Misidentified	Past Due					FAULT CATEGORY <table border="1"> <tr> <td>Completed By</td> <td>QC / QA Coordinator Approval</td> </tr> <tr> <td>Lead hand / Supervisor Approval Verification</td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </table>						Completed By	QC / QA Coordinator Approval	Lead hand / Supervisor Approval Verification					
				Environment	No Re-verification	Pressure/Forced	Temperature/Cure	Power Loss/Surge	Positioned Wrong																																																																																
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Lead hand / Supervisor Approval Verification																																																																																									
OTHER :																																																																																									

Picklist Print

Wednesday, July 05, 2017 10:24:24 AM

Work Order ID: 163664

163664

Parent Item: D350-748-101

D350-748-101

Parent Item Name: Fwd Crossstube AS350 / AS355

Start Date: 7/5/2017

Required Date: 8/17/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1149D0563J

Purchased

No

220

Each

1,548.000

8

8

NAS1149D0563J

**

Washer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
GA	36	
ml35774	36	
ST260a	700	
ml37820	700	
ST263	812	
ml37587	812	



DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

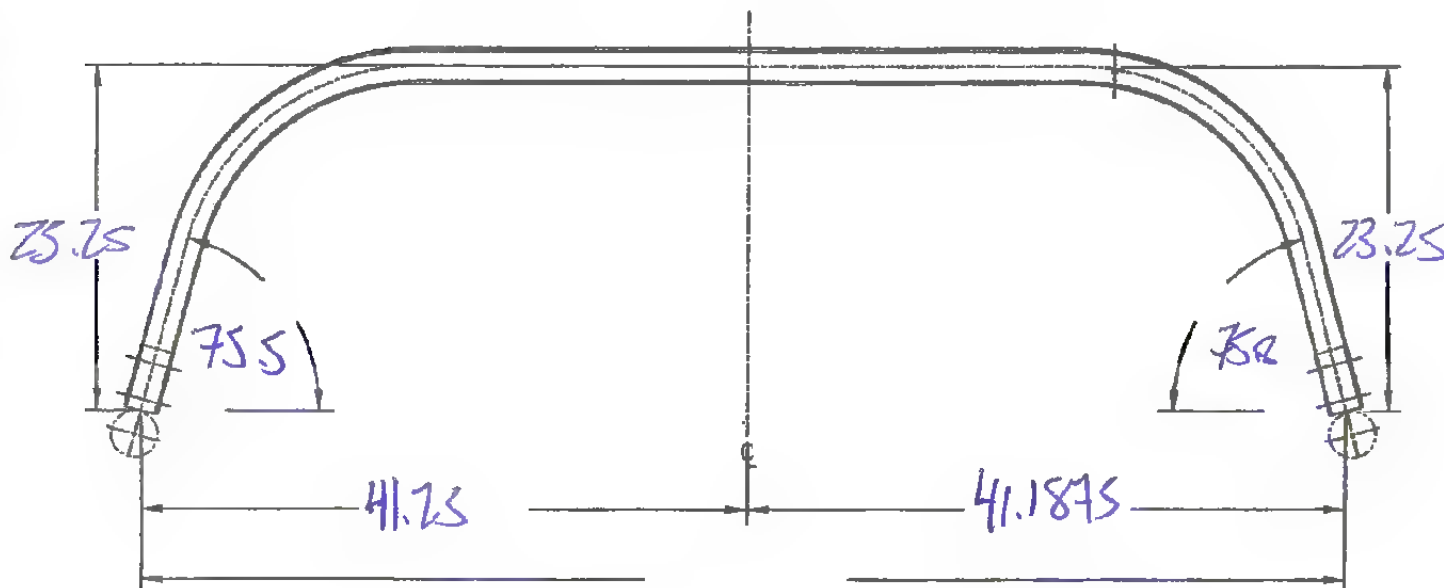
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____		DISPOSITION		AGAINST DEPARTMENT/PROCESS															
Part No. _____		Rework Scrap Use-as-is Suspected Unapproved		Skid-tube Machining Thermoforming Large Fab		Cross tube Small Fab Finishing Composite		Water Jet Prod. Eng. Coord. Rec/Store/Packaging Supplier		Engineering Quality Other									
NCR No. _____																			
Date: _____		Step #: _____		QTY Effective: _____		MRB (QS1042) Approval													
Description Work Order Deviation				Disposition															
												Completed By							
												Lead hand / Supervisor		Approval Verification		QC / QA Coordinator		Approval	
Root Cause				FAULT CATEGORY															
Environment		No Re-verification		Pressure/Forced		Temperature/Cure		Power Loss/Surge		Positioned Wrong									
Design		Operator		Bending		Set-up		Folio/Program		Outside Dimensions									
Doc/Data		Offset/Setup		Centre Not Concentric		BOM/Route		Grain		Over/Under tolerance									
Equip/Tooling		Supplier		Cracks		Broken/Damage/Defect		Weld		Part Incorrect									
Handling/Pre		Training		Crimp/Kink/Ripple/Wave		Inspection Incomplete/Unqualified		Wrong Stock Pulled		Part Lost/Missing									
Material		Use for Testing		Cuffs		Contamination		Out of Sequence		Part Moved									
Internal Transport		Poor Information		Crushing		Countersink		Off-set		Drawing									
Tribal Knowledge		Rushing		Heat Treat		Cut Too Short		Mislabeled		Finish									
LOA		Product Improvement		Wave/Twist in Tube		Instructions Incomplete/Unclear		Fit/Function		Misread									
Substation		Process Improvement		Marks/Chatter		Drill Holes		Misaligned/off center		Turning Sequence									
Past Expiry Date		Manufacturing Process																	
Misidentified		Past Due																	
				OTHER: _____															

DART AEROSPACE LTD		Work Order:	163664
Description: Crosstube High Fwd (AS350/355)		Part Number:	D350-748-101
Inspection Dwg: D350-748-141	Rev: H	Page 1 of 1	

Required Dimension	Min	Max
Height	23.00	23.50
1/2 Span	40.77	41.03
Angle	75	77
Total Span	81.55	82.06
Bending Passes	7	--
Crushing	--	8%
Twist	--	0.38



	Side A	Side B
Bending Passes	36	38
Crushing		
Comments		

QC15 Inspection	
Date	

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	10.08.23	Dwg Rev updated	KJ	
C	11.11.07	Dwg Rev updated	KJ	
D	12.04.16	Added bending, crushing & twist dimensions	KJ	
E	13.02.27	Dwg Rev updated	KJ	
F	14.02.13	Crushing & twist dimensions revised	KJ	
G	14.11.10	Height dimension revised	KJ	
H	15.04.14	Dwg Rev updated	KJ	
I	15.09.09	Crushing dimension revised	KJ	

Item	Qty	Part Number	Description
1	X	D850-748-141	CROSSTUBE ASSEMBLY (AS 3500355 HI FWD)
2	1	D8015-125	CROSSTUBE (OR D8017-115)
3	2	D3502-1	SUPPORT
4	2	D5123-7	CLAMP CUSHION
5	1	ASLS-1002-208	INSERT
6	1	NAS1140D0363J	WASHER (OR AN800J10)
7	2	MS21850-20	CLAMP (OR MS21920-21/22, PER DART SPEC. M-MS21920-20/21/22)
8	1	MS27039-4-10	SCREW
9	1	PROSEAL 800 B-2	SEALANT, AMS-S-8002 CLASS B-2

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D8015-125 OR D8017-115
FINISHED LENGTH AFTER TURNING = 112.270±.06 (AFTER BENDING/TURNING = 110.27 REF)
- 2) FINISH: MAGNETIC PARTICLE INSPECT PER DART QSI 038 4.2
CADDIM PLATE PER AMS-QP-4108, CLASS 1, TYPE II
PRIME INSIDE AND OUTSIDE PER DART QSI 006 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCE: PER DART QSI 016 UNLESS OTHERWISE NOTED.
WALL THICKNESS ECCENTRICITY PER DART QSI 038 7.2
MIN. ALLOWABLE WALL IS 0.020 FROM NOMINAL
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: DART PART NUMBER "D350-748-141" AND BATCH NUMBER ON INSIDE OF CUFF
PER DART QSI 044 6.4 (MIRACATING STYLUS)
- 7) WEIGHT: 30.45 lb
- 8) PART IS SYMMETRIC ABOUT CENTERLINE, EXCEPT FOR 80.287 HOLE.
- 9) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.007 MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. WHEN DRILLING HOLES EXTREME CARE MUST BE TAKEN AND CAREFUL DEBRASSING PERFORMED TO ENSURE A CLEAN HOLE WITH NO CRACKING/CHIPPING/ROOTERS.
- TURNING
10) BLEND OUT ALL EDGES FROM MACHINING LONGITUDINALLY. TRANSITION SHOULD BE SMOOTH. NOTE: ALL HOLES ARE DRILLED AFTER BENDING.
- 11) HEAT TREAT TO MIN 180 KSI PER MIL-T-6738 OR AMS2750/1E AFTER TURNING. ACCEPTABLE TO VERIFY TENSILE STRENGTH BY HANDBOSS TEST PER AETA E-15 TO AC-46 PROC.
- BENDING
12) ALL DIMENSION FOR BENT TUBE ARE POST STRESS RELIEF
- 13) BEND PROGRESSIVELY WITH A MINIMUM OF 7 PASSES PER SIDE. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D. ON TOP HALF OF BEND, AND 8% ON BOTTOM HALF OF BEND.
- 14) MAX AMPLITUDE OF RIPPING ALONG BENT PORTION OF THE TUBE IS 0.030 (2N A1-3)
- 15) AFTER BENDING, STRESS RELIEF TUBE AT 650°F ±40.25°F FOR A MINIMUM OF 2 HRS AND ALLOW TO COOL TO AMBIENT TEMPERATURE (REF AMS2750/1E)
- 16) MAX TWIST AFTER STRESS RELIEF WITH TUBE LAYED FLAT ON SURFACE. THE DIFFERENCE BETWEEN CUFF HEIGHTS FROM THE SURFACE MAY BE NO LARGER THAN 0.28 (2N C1-3).
- ASSEMBLY
17) TO INSTALL D3502-1 SUPPORT, ABRASE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY A 0.002 TO 0.005 THICK LAYER OF PROSEAL 800 CLASS B-2 (OR AMS-S-8002 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.
- 18) TORQUE CLAMPS 80 TO 90 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TIGHTENING. PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 800 SEALANT HAS CURED FOR 72 HOURS.

H	D8123-7 WAS D8006-003-360, MS21920-20 WAS -20, ALLOWABLE CRUSHING NOW 6% WAS 7%	CP	16.02.25
G	RIV ABRASION STRIP, SUPPORT NOW W/ PROSEAL & CUSHION, ADD STRESS RELIEF LONGER CUFF, NOW TRIMD AFTER BEND, ADD WALL DIMS & UPDATE TOL.	CP	12.06.12
F	ADD HRC TEST OPTION (D8-1) PER BAA 08040, ADD (D8-1) STOCK DIM NOW MODIFIED (D1-9)	CP	10.11.23
E	REVISE GENERAL NOTES, UPDATE TO CURRENT ADD STANDARD, RELOCATED FLAG #1 PER PAR 08-048 (2N A4-3) TOLERANCES (2N D4-1, D1-5)	RF	08.08.30
D	MAG. PARTICLE AND CAD PLATE AS UPD	CP	06.10.31
C	ADD CAD PLATING	CP	06.08.14
B	ADD D8017-115 & PRIME AND PAINT	CP	06.08.30
A	NEW ISSUE	CP	06.03.31
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED	AS		
ING. APPR.			
APPROVED			
DE APPR.			
DATE	16.02.25		

RELEASED

205 MAR 18

92 EAU 15-537

WORK ORDER
NO. 1636604 M-5

(307-05)

INCONT

DART AEROSPACE LTD

HAMMERSLEY, ONTARIO, CANADA

DRAWING NO. D850-748-141

REV. H

SHEET 1 OF 4

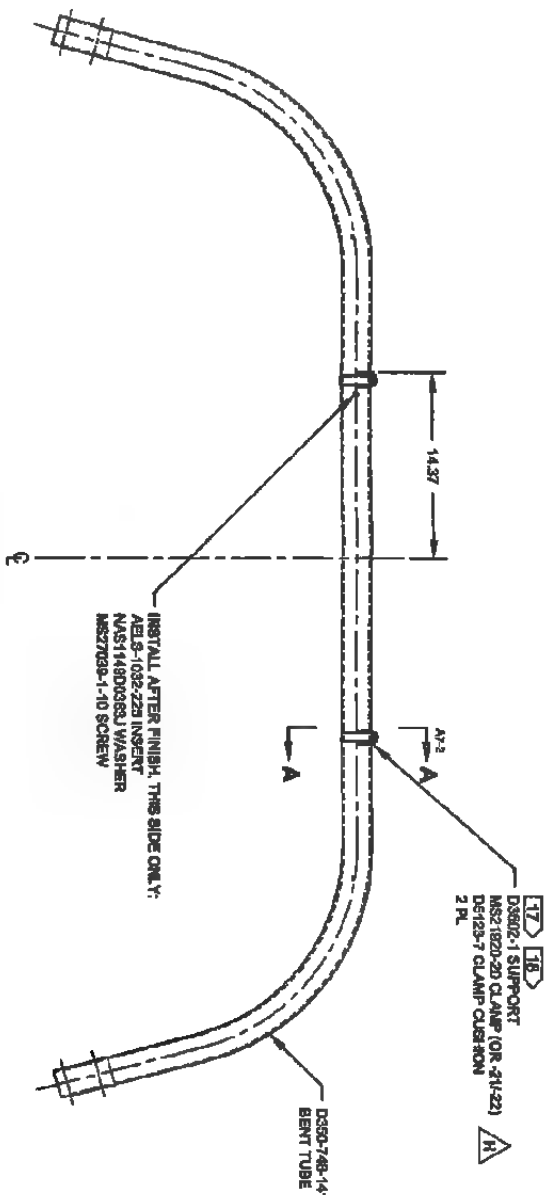
SCALE

NTS

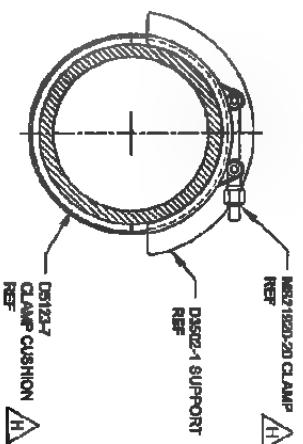
CROSS-TUBE (AS 3500355 HI FWD)

DATE

16.02.25



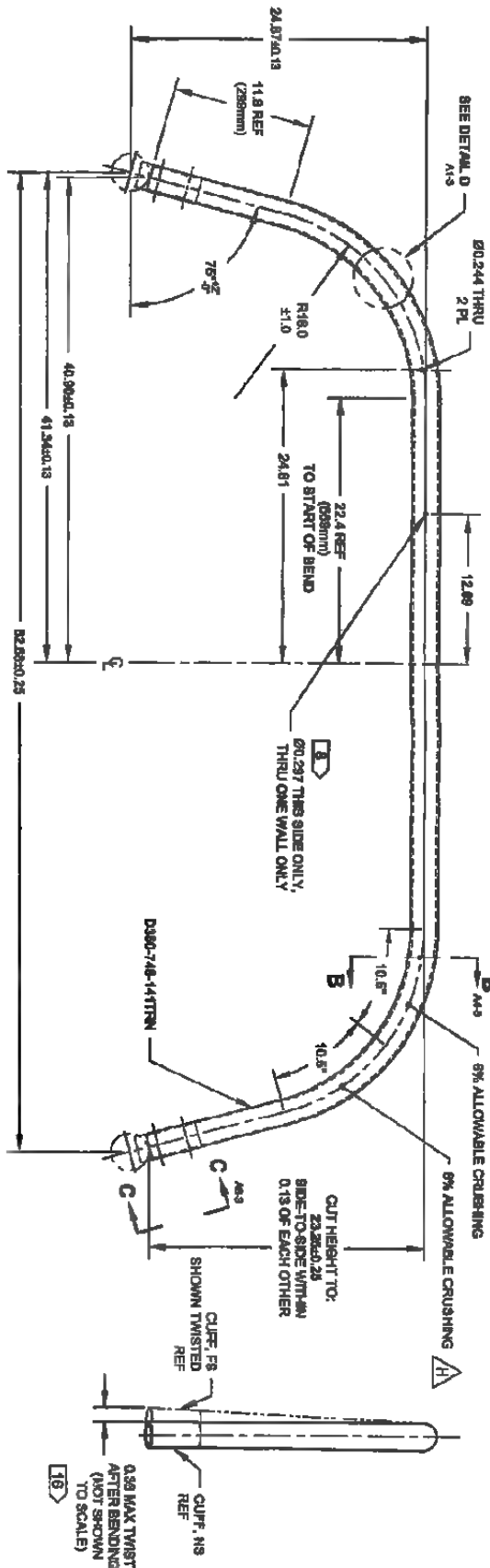
**D360-748-141
ASSEMBLY DETAIL**



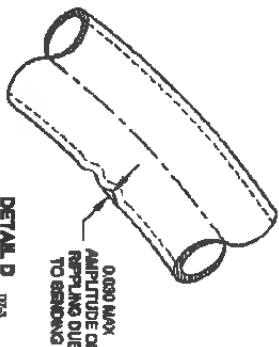
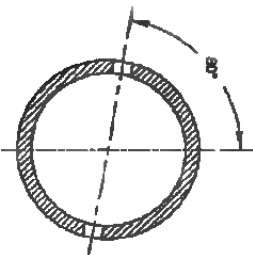
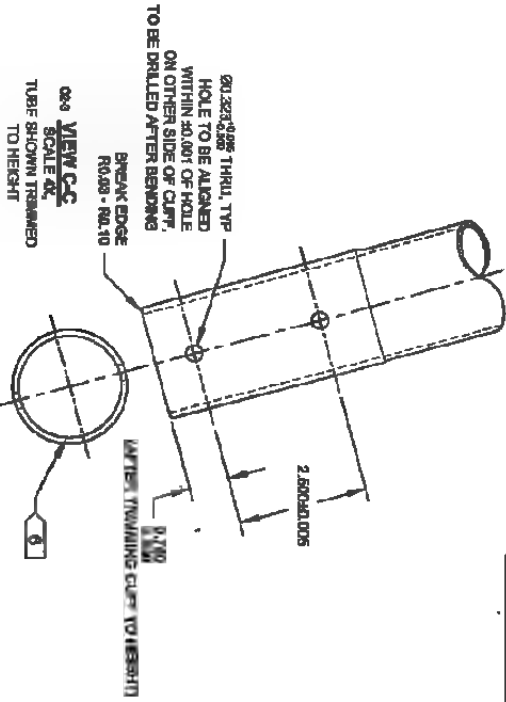
**SECTION A-A
SCALE 6X**

RELEASED
205 MAR '88

DESIGN	22	DART AEROSPACE LTD
DRAWN	22	HAVERSBURY, ONTARIO, CANADA
CHECKED	AS	DRAWING NO.
MFG. APPR.	AS	D360-748-141
APPROVED	22	REV. H
DE APPR.	22	SHEET 2 OF 4
DATE	15.02.25	SCALE
		NTS
		CROSS TUBE (AS 350/355 HI FWD)
		COMPONENT 25000 BY DART AEROSPACE LTD
		FOR THE USE OF THE AIR FORCE OF CANADA IN THE AIR FORCE OF CANADA
		PROPERTY OF THE AIR FORCE OF CANADA

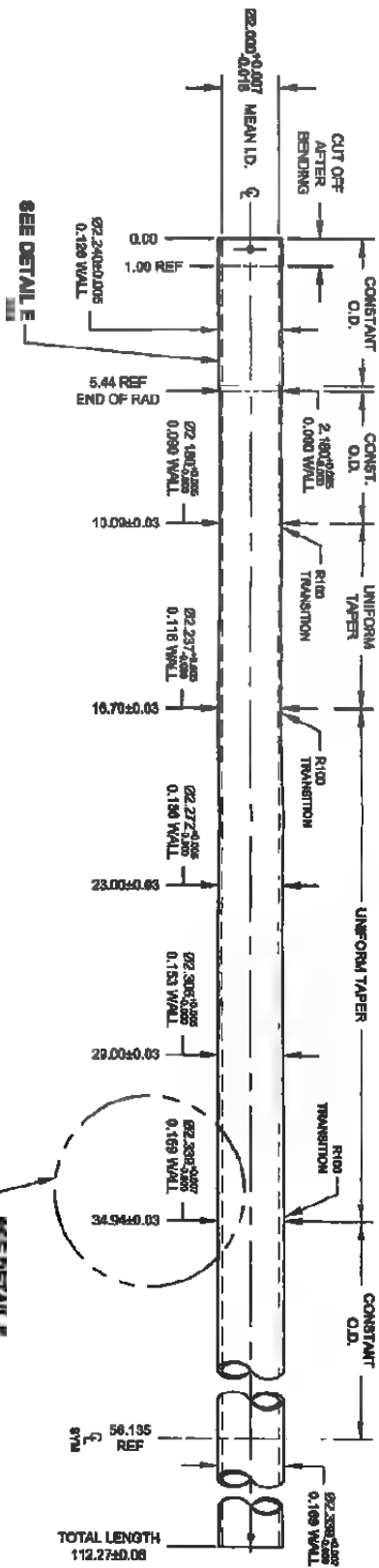


D360-748-141
 BENDING AND DRILLING DETAIL 13



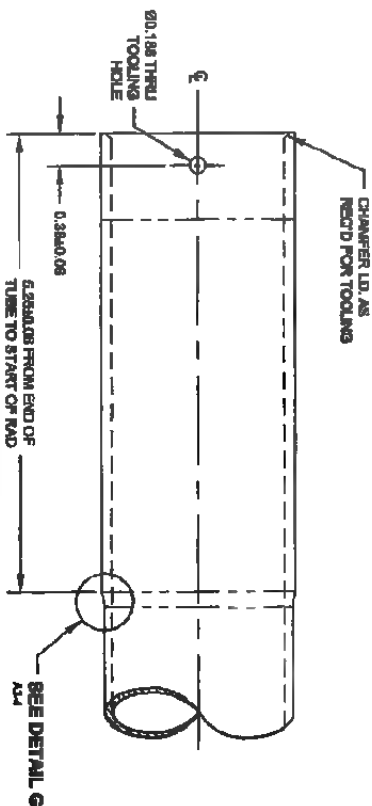
DESIGN	47	DART AEROSPACE LTD
DRAWN	AS	HAYESBURY, ONTARIO, CANADA
CHECKED	AS	DRAWING NO. D360-748-141
APPROVED	AS	REV. H
DATE	15.02.25	TITLE CROSS TUBE (AS 360/366 HI FWD) NTS
COPYRIGHT © 2005 BY DART AEROSPACE LTD		
THIS DRAWING IS THE PROPERTY OF DART AEROSPACE LTD. IT IS TO BE USED FOR THE PURPOSES SPECIFIED IN THE ORDER AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.		

RELEASED
 2015 MAR 18

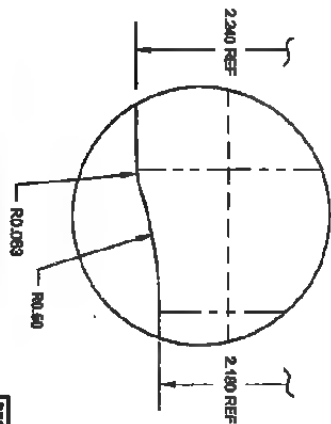


D250-149-141TRM
TURNING DETAIL

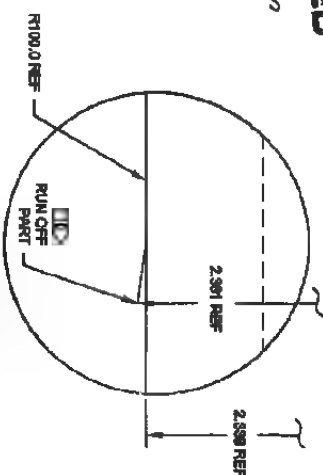
RELEASED
2015 MAR 18



DETAIL A:
CROSSTUBE CUFF
SCALE 3X



DETAIL B:
CUFF TRANSITION
SCALE NOT TO SCALE



DETAIL C:
TOOL RUN-OFF
SCALE NOT TO SCALE

DESIGN	44	DART AEROSPACE LTD
DRAWN	44	HAWKESBURY, ONTARIO, CANADA
CHECKED	44	
MRG APPR	44	
APPROVED	44	
DE APPR	44	
DATE	15.02.25	
TITLE	CROSSTUBE (AS 3500SS HI PWD)	SCALE
NTS		



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO36937

Purchase Order Date 7/5/2017

PO Print Date 7/5/2017

Page Number 2 of 2

Order From :
METCOR INC.
560 BOUL. ARTHUR SAUVE
SAINT-EUSTACHE, QC J7R 5A8
CA

VC-MET004

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 450 473 1884

Ship To Contact
Ship To Phone
Ship Via: Dart Truck
Ship Acct:

Buyer Chantal Lavoie
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB FCA - (Free Carrier)

Line Total: \$250.00

4 163664

D350-748-101
CROSSTUBE

7/6/2017

Yes

7/6/2017

1.00

\$250.00

\$250.00

HEAT TREAT CROSSTUBE AS PER QSI 010 4.3 WITHIN 12HOURS AFTER BENDING

Line Total: \$250.00

5 71401-45

PROCUREMENT
QUALITY CLAUSES

7/6/2017

No

7/6/2017

1.00

\$0.00

\$0.00

Procurement Quality Clauses
A005 right of entry
A021 dart aerospace processing
A024 process certifications
A026 certification of material conformance
A041 QUALITY MANAGEMENT SYSTEM
A042 DART NOTIFICATION BY SUPPLIER
A043 RETENTION OF QUALITY DOCUMENTS

Line Total: \$0.00

PO Total: \$1,000.00

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr: 1

Change Date: 7/5/2017

METCOR INC.

560 BOUL. ARTHUR SAUVÉ
ST-EUSTACHE, QC J7R 5A8
Tel: 450-473-1884 / Fax: 450-491-5498

Reçu de livraison

Delivery Receipt

BON DE TRAVAIL Order	EXPÉDITEUR Shipper ID	BON D'EXPÉDITION Shipper
320367	1	120684

EXPÉDITION COMPLÈTE / Shipped Complete

CLIENT /Customer 215

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053



LIVRÉ À /Shipped To

DART AEROSPACE
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

COMMANDE DU CLIENT Customer PO	BON DE LIVRAISON DU CLIENT Customer Shipper No	TYPE DE MATÉRIEL Material Type	DATE DE LA COMMANDE Order Date	TRANSPORTEUR Carrier
36937		Steel	2017/7/5	client
QUANTITÉ Quantity	No. PIÈCE / Part No.	NOM DE LA PIÈCE / Part Name	DESCRIPTION DE LA PIÈCE Part Description	POIDS Weight
				124,

4 D350-748-101

CROSSTUBE

(1) D350-748-101 163187

(1) D350-748-101 163188

(1) D350-748-101 163663

(1) D350-748-101 163664

1 NIL

2017-7-6

TYPE DE CONTENEUR Container Type	# DE CONTENEURS # Of Containers	COMMENTAIRES CONTENEUR Container Comments
NIL	1	

CERTIFICAT

EMPAQUETAGE Packing	
------------------------	--

QUANTITÉ EXPÉDIÉE / Quantity Shipped : 4

POIDS EXPÉDIÉ / Weight Shipped : 124,00

QUANTITÉ RESTANTE / Quantity Remaining : 0

POIDS RESTANT / Weight Remaining : 0,00

CERTIFICAT

QUANTITÉ EXPÉDIÉE / Quantity Shipped : 4

POIDS EXPÉDIÉ / Weight Shipped : 124,00

Signature:

Date:

EXPÉDIÉ LE / Shipped On : 2017/07/06

METCOR INC.

500 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
320367	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

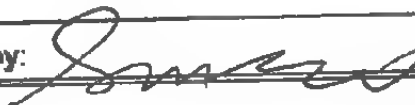
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COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
36937	N/A	Steel		
SPECIFICATIONS DU PROCÉDÉ processing specifications				
STRESS REL				
SAE AMS 2759/1 REV.E				
EXIGENCE / requirement SPÉCIFICATIONS / specified TESTS EXÉCUTÉS / performed RÉSULTATS DE TESTS / results				
Visual				
QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description		
4	124	D350-748-101 CROSSTUBE (1) D350-748-101 163187 (1) D350-748-101 163188 (1) D350-748-101 163663 (1) D350-748-101 163664 <u>1 NIL</u>		

SP17-76

COMMENTAIRES / comments

APPROUVÉ par / Approved by:



DATE: 2017-07-06

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détaillé

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
320367	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
36937	N/A	Steel		
SPÉCIFICATIONS DU PROCÉDÉ processing specifications				
STRESS REL				
SAE AMS 2759/1 REV.E				
EXIGENCE / requirement SPÉCIFICATIONS / specified TESTS EXÉCUTÉS / performed RÉSULTATS DE TESTS / results				
Visual				
QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description		
4	124	D350-748-101 CROSSTUBE (1) D350-748-101 163187 (1) D350-748-101 163188 (1) D350-748-101 163663 (1) D350-748-101 163664 1 NIL		

COMMENTAIRES / comments

STRESS RELIEF 650F, 2 HRS

Le traitement thermique (TT) a été fait en utilisant des équipements en conformité avec AMS2759 et AMS 2750. Le TT a été fait tel que requis par AMS2759 et toutes les vérifications et les tests demandés ont été faites et documentés. Aucun changement n'a été faite par rapport au TT. On certifie que le matériel a été fabriqué, échantillonné, testé et inspecté en accord avec AMS2759 et le bon de commande et le matériel rencontre les exigences spécifiées.

Ce document et les documents qui lui sont joints peuvent contenir des informations confidentielles, être soumis aux réglementations relatives au contrôle des exportations ou ayant un caractère privé. S'ils ne vous sont pas destinés, nous vous signalons qu'il est strictement interdit de les divulguer, de les reproduire ou d'en utiliser de quelque manière que ce soit le contenu. Toute exportation ou réexportation non autorisée est interdite.

Heat treatment (HT) was performed with equipment that meets the requirements of AMS2759 & AMS2750. All HT operations were in compliance with AMS2759 and all verifications have been performed and documented. No unauthorized changes were performed in regards to the HT. We certify that the material was manufactured, sampled, tested and inspected in accordance with AMS2759 and the purchase order and was found to meet the requirements.

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METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détaillé

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
320367	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

export or re-export is prohibited.

APPROUVÉ par / Approved by:

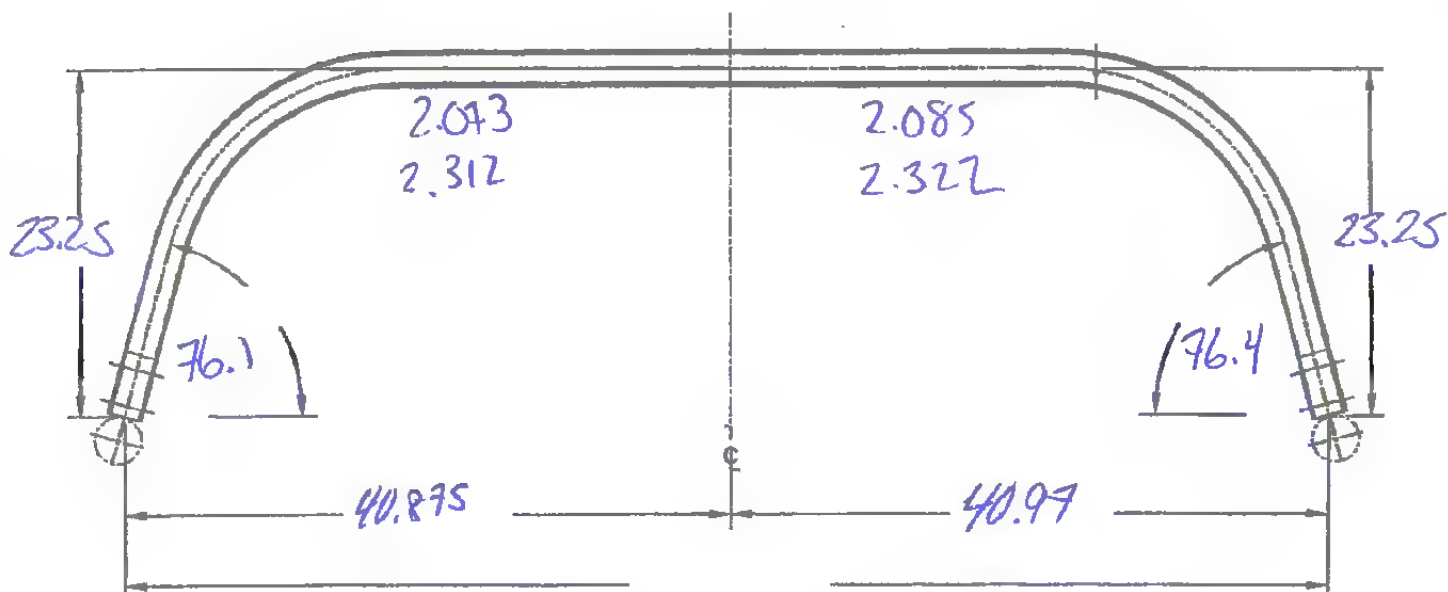
Isabel Otero
Isabel Otero
QA Technician



DATE: 2017-07-06

DART AEROSPACE LTD		Work Order:	
Description: Crosstube High Fwd (AS350/355)		Part Number:	D350-748-101
Inspection Dwg: D350-748-141 Rev: H			Page 1 of 1

Required Dimension	Min	Max
Height	23.00	23.50
1/2 Span	40.77	41.03
Angle	75	77
Total Span	81.55	82.05
Bending Passes	7	—
Crushing	—	8%
Twist	—	0.38



	Side A	Side B
Bending Passes	36	38
Crushing	5.40%	5.40%
Comments		

QC15 Inspection	DAS
Date	38
	8-89

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	10.08.23	Dwg Rev updated	KJ	
C	11.11.07	Dwg Rev updated	KJ	
D	12.04.16	Added bending, crushing & twist dimensions	KJ	
E	13.02.27	Dwg Rev updated	KJ	
F	14.02.13	Crushing & twist dimensions revised	KJ	
G	14.11.10	Height dimension revised	KJ	
H	15.04.14	Dwg Rev updated	KJ	
I	15.09.09	Crushing dimension revised	KJ	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO37045

Purchase Order Date 7/13/2017

PO Print Date 7/20/2017

Page Number 7 of 9

Order From :

VC-CAD002

CADORATH COATING
2150 LOGAN AVE.
WINNIPEG, MB R2R 0J2
CA

Ship To : DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name

Vendor Phone

204 633 9420

Ship To Contact

Ship To Phone

Ship Via:

Journey Freight collect

Ship Acct:

Buyer

Diane Baker

Customer POID

Customer Tax #

10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

13	163663	D350-748-101 Fwd Crosstube AS350 / AS355	7/24/2017	1.00	\$803.42	\$803.42
			Yes			
			7/24/2017			

Stress relief at 375 degree for 5hrs
Magnetic Particle Inspect per ASTM E1444
Cad Plate per AMS-QQ-P-416B, Class 1, Type 2
Embrittle relief at 375 degree for 8 hrs, Chromate Treat
C of C req'd

Line Total: \$803.42

14 163664

D350-748-101 Fwd
Crosstube AS350 / AS355

7/24/2017

1.00

\$803.42 \$803.42

Yes

7/24/2017

Stress relief at 375 degree for 5hrs
Magnetic Particle Inspect per ASTM E1444
Cad Plate per AMS-QQ-P-416B, Class 1, Type 2
Embrittle relief at 375 degree for 8 hrs, Chromate Treat
C of C req'd

DAE
30
9-89

Line Total: \$803.42

Note:

7/20/2017

Packing Slip

Page 1 of 2



Cadorth Coating

2150 Logan Avenue, Winnipeg, Manitoba R2R-0J2

Phone: (204) 633-9420 Fax: (204) 633-8033

INVOICE NUMBER:

S90743

Net 2% Interest Per Month charged on Overdue Accounts.

Any claims for shortages, overcharges, or damaged goods must be made within seven (7) days from receipt of goods.

Sold To:

Dart Aerospace Ltd.
1270 Aberdeen St.

Hawksbury, ON K6A 1K7

ShipTo:

Customer Order #: 37045
Date Received: Jul-18-2017

Terms: NET 30 DAYS

G.S.T. #: 10071 6547 RT0001

Ship Via:

Ship Date: Jul-24-2017

Item #	Qty	P/N & Description	S/N
1	1 EA	CROSSTUBE P/N d350-748-101 ✓	163664 W/O 172796
2	1 EA	CROSSTUBE P/N d350-748-101	163663 W/O 172797
3	1 EA	CROSSTUBE P/N D350-748-201	163660 W/O 172803
4	1 EA	CROSSTUBE P/N d350-748-101	163184 W/O 172790
5	1 EA	CROSSTUBE P/N d350-748-101	163185 W/O 172791
6	1 EA	CROSSTUBE P/N d350-748-101	163183 W/O 172792
7	1 EA	CROSSTUBE P/N d350-748-101	163186 W/O 172793
8	1 EA	CROSSTUBE P/N d350-748-101	163665 W/O 172794
9	1 EA	CROSSTUBE P/N d350-748-101	163188 W/O 172795
10	1 EA	CROSSTUBE P/N D350-748-201	161645 W/O 172798
11	1 EA	CROSSTUBE P/N D350-748-201	161647 W/O 172799
12	1 EA	CROSSTUBE P/N D350-748-201	163180 W/O 172800

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